



News Release

Arizona Department of Public Safety

POST OFFICE BOX 6638 * PHOENIX, ARIZONA 85005-6638

November 2, 2005

Contact DPS Scientific Analysis Superintendent Todd Griffith at 602 223-2494

Department of Public Safety and FBI Announce the Opening of Mitochondrial DNA in Arizona

A New State-of-the-Art DNA Technology

The Arizona DPS Crime Laboratory System has partnered with the FBI Laboratory in Quantico, Virginia, to bring a regional mitochondrial DNA (mtDNA) laboratory to the State. Four crime laboratories nationally were selected to partner with the FBI to bring mtDNA to the Nation, and the Arizona DPS is the only laboratory in the western United States. Also, the Arizona DPS is the *first* of the four partner labs to go on-line with this important addition to DNA capabilities.

MtDNA analysis is a specialized DNA test that has not been available in public crime laboratories because it is very costly and time consuming. Therefore, the FBI established this capability in their laboratory and then, recognizing the need to expand this service nationwide, obtained Congressional support and funding to establish the four regional mtDNA laboratories. DPS is proud to provide this mtDNA analysis service as one of only a few forensic laboratories in the United States.

In this partnership, the Arizona DPS Crime Laboratory System is providing space, nationally recognized forensic management, an accredited crime laboratory facility, appropriate scientific procedures, and expert courtroom testimony, while the FBI provides funding for personnel and supplies, scientific training for personnel, and coordination of national cases to be submitted to DPS for mtDNA.

The state of Arizona benefits greatly from this partnership because 25% of the mtDNA analysis capabilities established at the DPS Crime Laboratory go directly to Arizona law enforcement agencies to solve difficult violent crime investigations and missing persons cases. The remaining 75% of capacity will be utilized to analyze cases from throughout the nation to augment the capacity previously only available at the FBI.

MtDNA analysis is important for solving crimes because certain types of evidence or certain conditions make mtDNA results very powerful in exonerating or implicating suspects of crimes, particularly violent crimes. MtDNA is of great benefit in the following situations:

Hairs: Cells in a human hair shaft contain only mtDNA and, therefore, mtDNA analysis is the only DNA technique that can provide important scientific evidence as to the origin of the hair. For example, a shed hair found on the body of a rape victim that is foreign to that victim could be a good candidate for mtDNA analysis.

Bones or Teeth: Unidentified remains found in the desert often have no known standards from the suspected missing person for comparison purposes. Therefore, since mtDNA is inherited maternally, a sample from a maternal relative can be compared via mtDNA to identify the remains.